

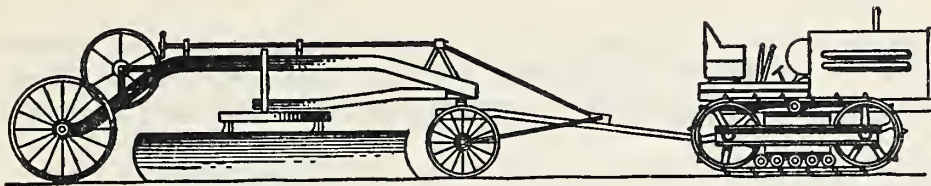
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CONSTRUCTION



HINTS

UNITED STATES DEPARTMENT OF AGRICULTURE, FOREST SERVICE
WASHINGTON, D. C.

Volume 5.

October, 1939

No. 8.

What becomes of the hydraulic pumps on discarded dump trucks?
On pages 2 & 3 is shown a use Region 8 is making of them.

Camp Evelyn, F-60, Upper Michigan National Forest has furnished complete details of a tow-bar used for ready removal of trucks from garages in case of emergency and details of a desirable arrangement and construction of tool boxes and seats for trucks transporting enrollees and tools. These details appear on pages 4, 5 and 6.

Oiled cables are seldom used in FS work but the method of lubricating wire rope, submitted by Region 6, and shown on page 7, should be found very useful when cables are to be stored for a considerable length of time.

On page 8 will be found a description of and sketches for a proposed new wire reel which were submitted by Camp Hutchins Creek F-8, Wolf Lake, Illinois, Shawnee Purchase Unit - now a part of the Shawnee National Forest.

E. S. Massie, Jr.,
Editor.

Conversion of Dump Truck Hydraulic Pump to Hydraulic Grader Operation

Region 8 has developed in its central repair shop at Forest, Mississippi, a method of converting salvaged hydraulic pumps from dump trucks, to the operation of hydraulically controlled graders.

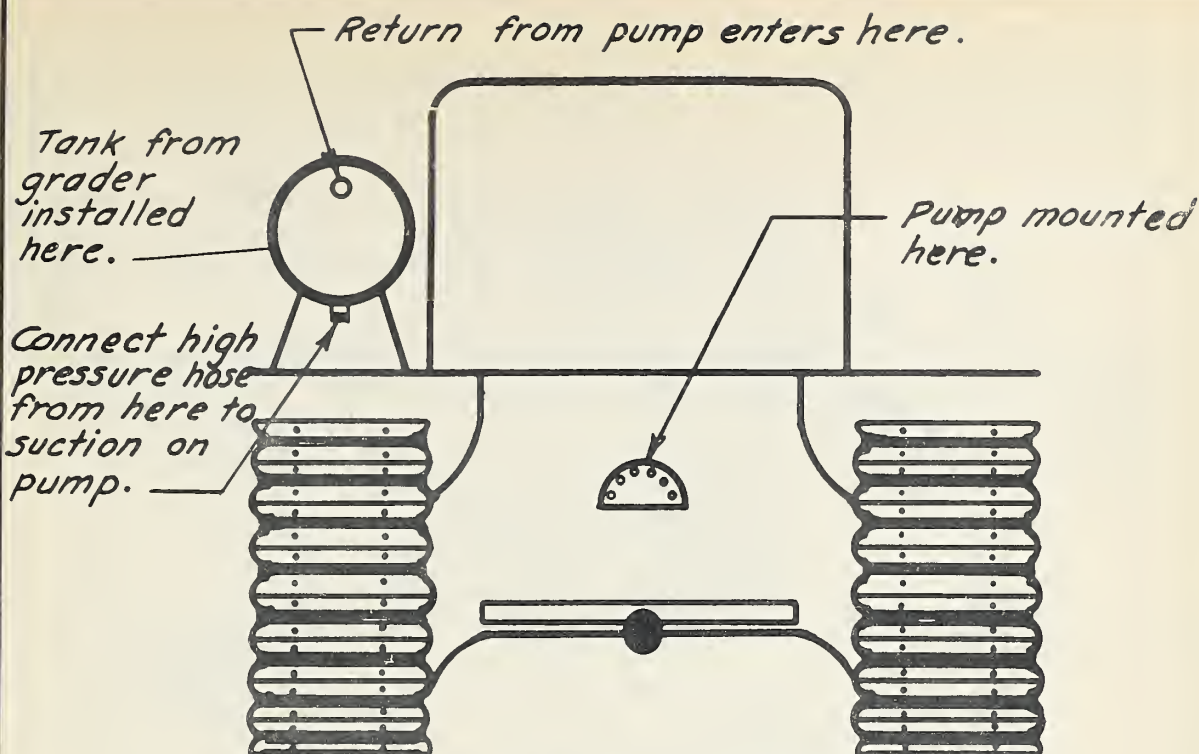
The pump is mounted on a tractor, as illustrated in the sketch on the opposite page, and takes the place of the gasoline engine and pump with which hydraulically controlled graders are normally equipped.

The connections are made as follows:

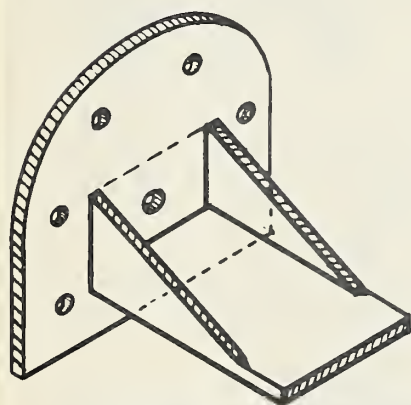
1. Remove gasoline engine complete from grader.
2. Attach sections of 3/4-inch pipe along grader frame extending from the point opposite the hydraulic control box to the front end of the grader frame. Connect this pipe to the control box with high pressure hydraulic hose allowing sufficient slack for vibration and twisting of grader.
3. Attach sections of 3/4-inch pipe to grader tongue to within a foot or two of the front end. Connect rear end of this pipe to the pipe on grader frame with high pressure hydraulic hose of sufficient length to permit hose to be slack in all positions of the grader tongue. Make similar connections from front end of pipe on tongue to pump and tank on tractor.

The estimated cost for making this conversion is:

Parts and materials.....	\$12.50
Labor at \$1.20 per hour.....	<u>36.00</u>
Total.....	\$48.50



REAR VIEW OF TRACTOR



PUMP SUPPORT

Snug fit in tractor housing. Plate welded to cover plate and bracket. Drilled & bored for shaft & turned on outside to avoid getting out of center.

Control Valve

Pump from dump body truck.

Coupling.

Bearing

Splined coupling welded on old axle shaft and machined to size.

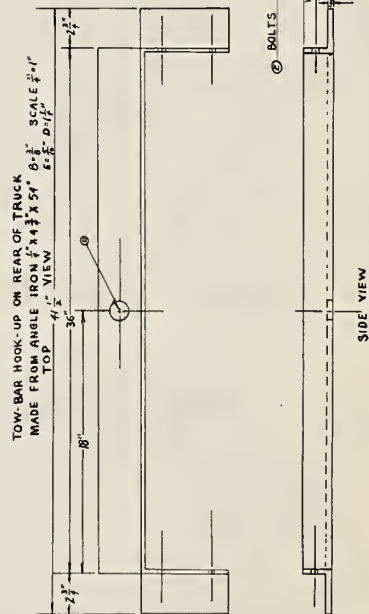
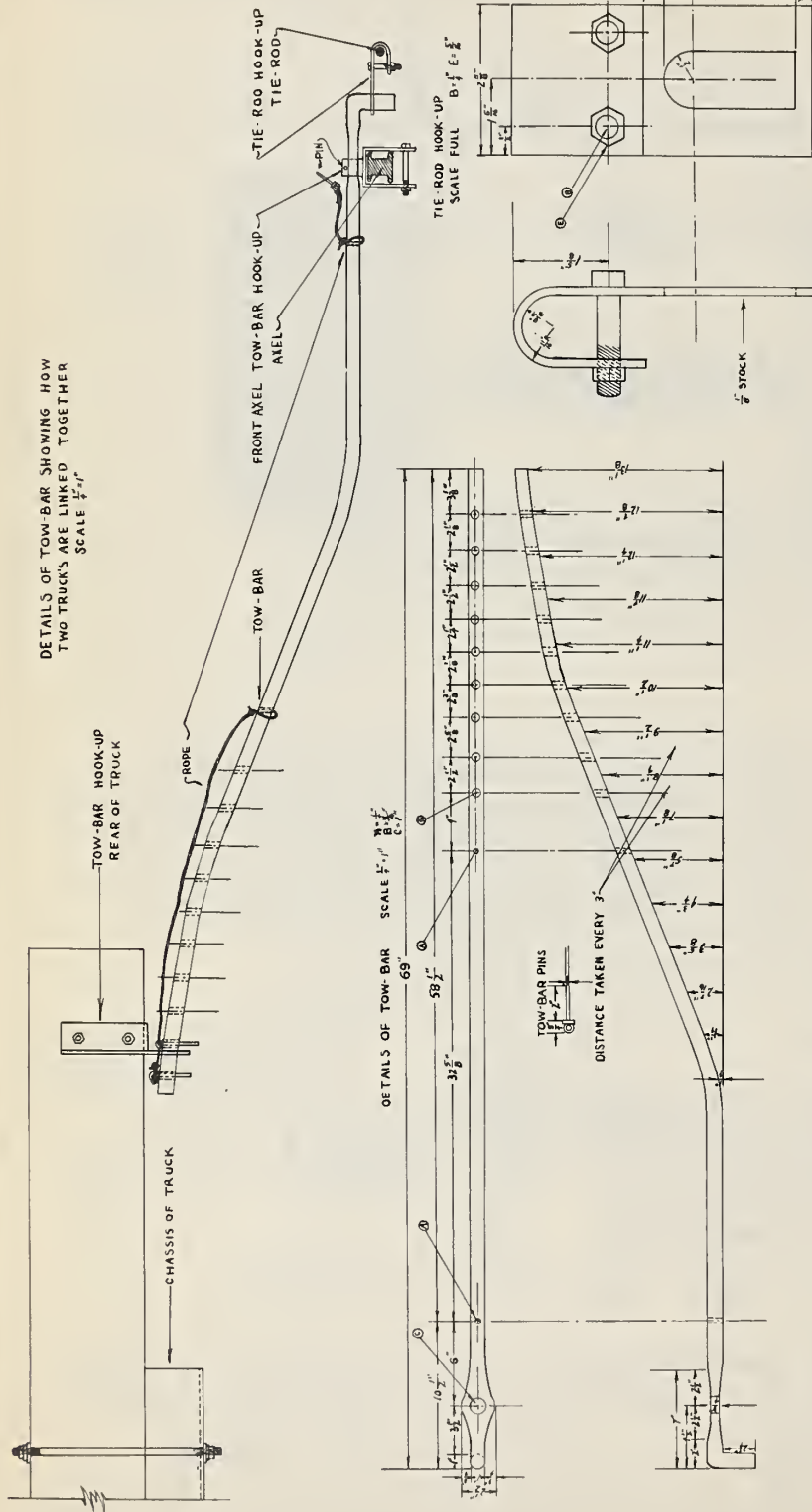
SIDE VIEW OF PUMP & SHAFT

Note:

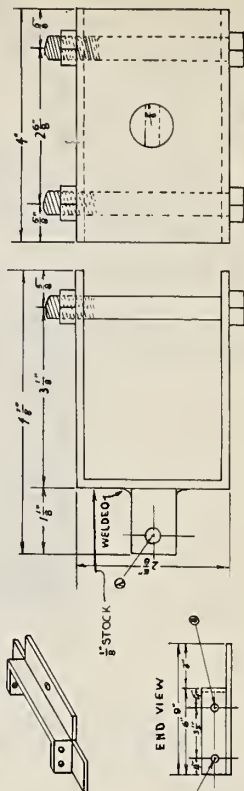
Tank & Pump are connected with high pressure hose so that one hose remains on each when disconnected from grader, there by letting pump run in oil.

SKETCH OF HYDRAULIC PUMP
FROM DUMP TRUCK
ATTACHED TO CAT. 50 TRACTOR
USED TO OPERATE HYDRAULIC GRADER

DETAILS OF TOW-BAR SHOWING HOW
TWO TRUCKS ARE LINKED TOGETHER
SCALE $\frac{1}{2}$ " = 1'

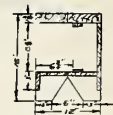
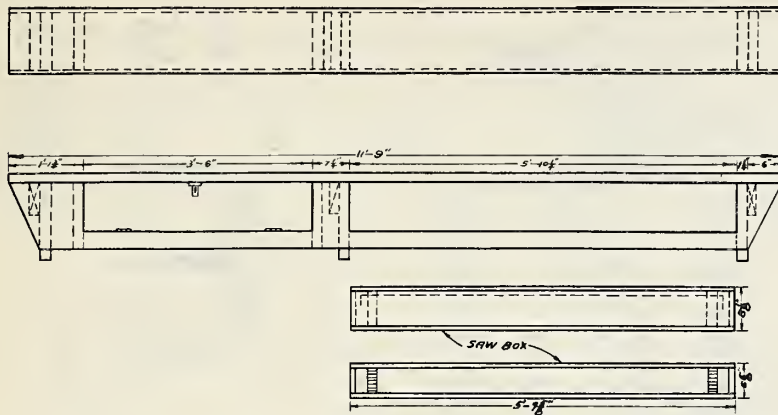


FRONT AXEL TOW-BAR HOOK UP
SCALE FULL
AS SHOWN



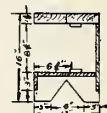
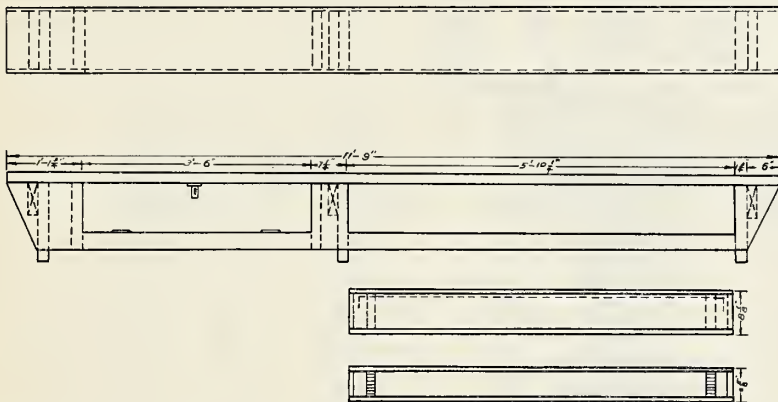
WORK BOOK - TRUCK ACCESSORIES
DESIGNED BY
MILF. MIALIC
PROJECT SUPERINTENDENT
DRAWN BY
STEPHEN WILLIAMS CO 3613 CCC
7-27-38

ELEVATION OF TRUCK BENCH WITH TOOL COMPARTMENTS



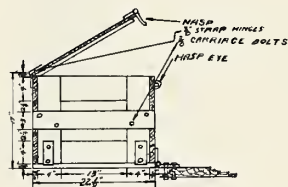
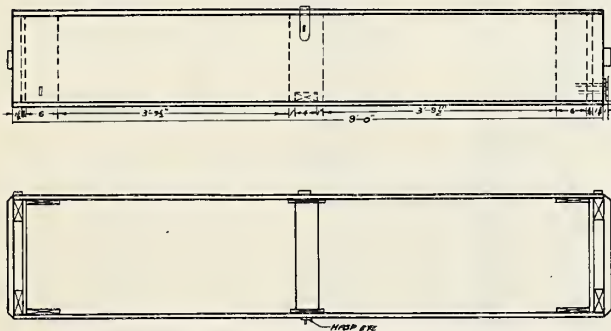
CROSS SECTION

ELEVATION OF TRUCK BENCH WITH TOOL COMPARTMENTS



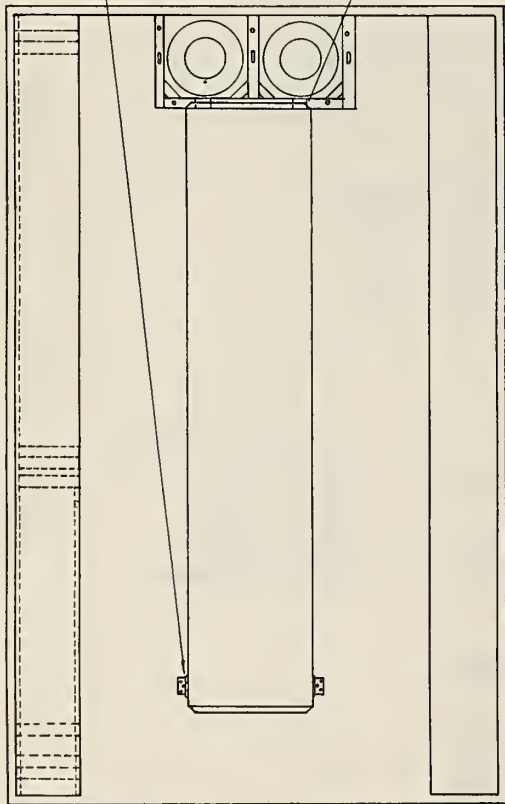
CROSS SECTION

TRUCK TOOL BOXES

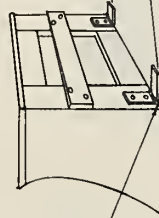


WORK TRUCK ACCESSORIES

DESIGNED BY
CONN LEPPAAT & DON VALUEN - FRANK C & N
COMP. BULLYIN P-BOARDS METHOD, NICHOLIN
HIWATHA NAT'L FOREST
C.A. HARTZ, PROJECT SUPERINTENDENT
DRAWING BY DON LEPPAAT FRANK C & N
TRUCK BY GLEN JOHNSON (CROSS) CASE 13 USE.
5/4/39



DETAIL OF HINGES
DEvised FROM SALVAGED HINGES

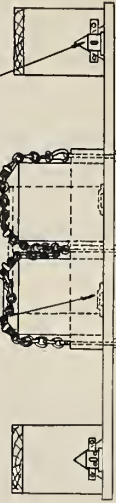


DETAIL OF TOOL BOX END SHOWING HOW CAN RACK HOLDS
IT FROM SHIFTING

FLOOR PLAN OF BENCH, TOOL BOX, & CAN ARRANGEMENT ON TRUCK BED



SIDE ELEVATION OF ARRANGEMENT ON TRUCK BED



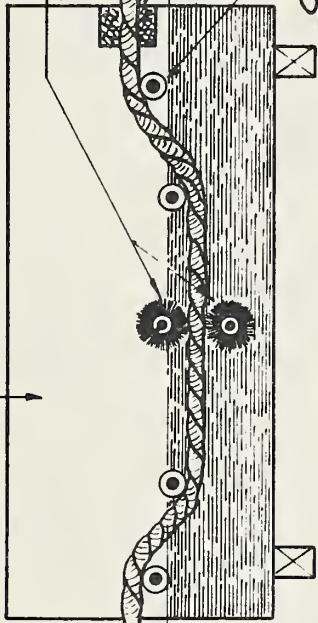
END ELEVATION

WORK TRUCK ACCESSORIES
DESIGNED BY
DON LEIGHART & DON VAUGHAN FROM CEM
CAMP EVELYN P-66 (R-100) WILSON, ARIZONA
HIWATHA NATL FOREST
C. HARTZ PROJECT SUPERINTENDENT
DRAWN BY GLEN SOLES (LEADER) & J. COLE
11/2/59

METAL TANK CONTAINING STANDARD
CABLE LUBRICANT.

DIRECTION OF
CABLE TRAVEL

OIL LEVEL



REVOLVING BRUSHES

SWAB FOR CLEANING
SURPLUS OIL.

GUIDES FOR CABLE

SECTIONAL VIEW

END VIEW

U. S. FOREST SERVICE, REGION 6
MECHANICAL IMPROVEMENTS & REPAIRS
METHOD OF LUBRICATING
WIPE ROPE.
SUBMITTED BY GEORGE B. HALL
FOREST REGION 6 DATE 5-2-38
PORTLAND, ORE. SKETCH Q52

PROPOSED NEW WIRE REEL

This reel has particular adaptability in reeling rolls of wire in telephone line construction and in reeling wire of any other type.

The spool has a capacity of one standard roll of telephone wire, handling approximately one to one and one half miles of No. 12 wire. It is particularly useful in reeling barbed wire into rolls that are convenient to handle providing the roll is bound prior to separation from reel, which is accomplished by the loosening of three of the arm set bolts on the reel arms.

The frame which is bolted to 2" x 4" wooden bases, preferably oak, is composed of two lengths of 3-8" x 1½" wrought flat iron shaped as shown in the drawing and stiffened by diagonal iron of the same size. The reel proper is constructed of like material, the ends of the arms of the "U" shaped cradles being flattened to facilitate the piloting of the wire being reeled; ½" bolts make the cradles adjustable in removing rolls of wire already reeled. It is necessary only to give the movable sections one-half turn toward the center of the reel to remove the wire rolls upon completion of reeling.

An end wrench to fit the bolts above mentioned is recommended as an integral part of the apparatus.

